

Acronyms & Glossary of Terms

Acronyms

The following acronyms are commonly used throughout the Louisville Metro Multi-Hazards Mitigation Plan and Five-Year Action Plan.

ARC	American Red Cross	KGS	Kentucky Geological Survey
BCA	Benefit Cost Analysis	KIPDA	Kentuckiana Regional Planning & Development Agency
BFE	Base Flood Elevation	KRC	Kentucky Residential Code
C&R	Codes & Regulations	KRS	Kentucky Revised Statutes
CFR	Code of Federal Regulations	KWPC	Kentucky Weather Preparedness Committee
CHR	Center for Hazards Research, University of Louisville	KY VOAD	Kentucky Volunteer Organizations Active in Disaster
CoCoRaHS	Community Collaborative Rain, Hail & Snow	KyDPH	Kentucky Department of Public Health
CRS	Community Rating System program	KyEM	Kentucky Division of Emergency Management
CSEPP	Chemical Stockpile Emergency Preparedness Program	KYTC	Kentucky Transportation Cabinet
CTP	Cooperative Technical Partners	L G & E	Louisville Gas and Electric
DFIRM	Digital Flood Insurance Rate Map	LEPC	Local Emergency Preparedness Committee
DHS	Department of Homeland Security	LFR	Louisville Fire and Rescue
DMA	Disaster Mitigation Act of 2000	LMPD	Louisville Metro Police Department
EAS	Emergency Alert System	LOJIC	Louisville/Jefferson County Information Consortium
EMA	Louisville Metro Emergency Management Agency	LOPC	Louisville Olmsted Park Conservancy
EMS	Louisville Metro Emergency Medical Service	LRC	Legislative Research Commission
EOC	Emergency Operations Center	LWC	Louisville Water Company
EOP	Emergency Operations Plan	MMRS	Metropolitan Medical Response System
EPA	Environmental Protection Agency	MRC	Medical Reserve Corps
ERT	Estimated Restoration Times	MSD	Louisville & Jefferson County Metropolitan Sewer District
FEMA	Federal Emergency Management Agency	NCDC	National Climatic Data Center
FIRM	Flood Insurance Rate Map	NDMS	National Defense Medical System
FIS	Flood Insurance Study	NFIP	National Flood Insurance Program
FLASH	Federal Alliance for Safe Homes	NLE	National Level Exercise
FMA	Flood Mitigation Assistance grant program	NMSZ	The New Madrid Seismic Zone
FPMP	Floodplain Management Plan	NOAA	National Oceanic and Atmospheric Administration
GIS	Geographic Information System	NOB	Normal Operating Budget
GLAR	Greater Louisville Board of Realtors	NRCS	Natural Resources Conservation Service
GLI	Greater Louisville Inc.	NWS	National Weather Service
GLTV	Greater Louisville Television	PDM	Pre-Disaster Mitigation, national grant program
HAZUS- MH	HAZARDS US - Multi-Hazard	PDS	Louisville Metro Planning & Design Services
HBAL	Home Builders Association of Louisville	PGA	Peak Ground Acceleration
HERA	Healthcare Emergency Response Association	PVA	Jefferson County Property Valuation Administrator
HMGP	Hazard Mitigation Grant Program	PW	Louisville Metro Department of Public Works & Assets
HMO	Hazardous Materials Ordinance	RFC	Repetitive Flood Claim grant program
HMPC	Hazardous Materials Use and Spill Prevention Control	Risk MAP	Mapping, Assessing, and Planning
HR	Louisville Metro Human Relations	SHMO	State Hazard Mitigation Officer
ICC	Increased Cost of Compliance for flood insurance	SRL	Severe Repetitive Loss
IPL	Louisville Metro Dept. of Inspections, Permits, License	STAPLEE	Social, Technical, Administrative, Political, Legal, Economic, Environmental
ISO	Insurance Services Office	TARC	Transit Authority of River City
IT	Information Technology	TRIMARC	Traffic Response and Incident Management Assisting the
JCPS	Jefferson County Public Schools	U of L	University of Louisville
JHSMH	Jewish Hospital & St. Mary's HealthCare	UPS	United Parcel Service
KBC	Kentucky Building Code	USACE	U. S. Army Corp of Engineers
KCTCS	Kentucky Community & Technical College System	USGS	U. S. Geological Survey
KDOW	Kentucky Division of Water	VOAD	Voluntary Organizations Active in Disaster

Glossary of Terms

This resource defines terms that are used in, or support, the planning document.

100-year flood – A flood that has a 1 percent chance of being equaled or exceeded in any one year. This flood event is also referred to as the base flood. The term "100-year flood" can be misleading. It is not the flood that will occur once every 100 years. Rather, it is the flood elevation that has a 1 percent chance of being equaled or exceeded each year. Thus, the 100-year flood could occur more than once in a relatively short period of time. The 100-year flood, which is the standard used by most Federal and state agencies, is used by the National Flood Insurance Program (NFIP) as the standard for floodplain management and to determine the need for flood insurance.

500-year flood – A flood that has a 0.2 percent chance of being equaled or exceeded in any one year.

Acquisition of hazard-prone structures – Local governments can acquire lands in high hazard areas through conservation easements, purchase of development rights, or outright purchase of property.

Aggregate Data – Data gathered together across an area or region (for example, census tract or census block data).

Annualized Loss – The estimated long-term value of losses from potential future hazard occurrences of a particular type in any given single year in a specified geographic area. In other words, the average annual loss that is likely to be incurred in each year based on frequency of occurrence and loss estimates. Note that the loss in any given year can be substantially higher or lower than the estimated annualized loss.

Annualized Loss Ratio – Represents the annualized loss estimate as a fraction of the replacement value of the local building inventory. This ratio is calculated using the following formula: Annualized Loss Ratio = Annualized Losses / Exposure at Risk. The annualized loss ratio gauges the relationship between average annualized loss and at-risk building value. This ratio can be used as a measure of relative risk between hazards as well as across different geographic units.

Asset – Any manmade or natural feature that has value, including, but not limited to people, buildings, infrastructure (such as bridges, roads, and sewer and water systems), and lifelines (such as electricity and communication resources; or environmental, cultural, or recreational features like parks, dunes, wetlands, or landmarks).

At Risk – Exposure values that include the entire building inventory or population value in a census block or tract that lie within, or bordering the inundation areas or any area potentially exposed to a hazard based on location.

Base Flood – Flood that has a 1 percent probability of being equaled or exceeded in any given year. It is also known as the 100-year flood.

Base Flood Elevation (BFE) – Elevation of the base flood in relation to a specified datum, such as the National Geodetic Vertical Datum of 1929. The BFE is used as the standard for the National Flood Insurance Program.

Benefit-cost analysis (BOCA) – Benefit-cost analysis is a systematic, quantitative method of comparing the projected benefits to projected costs of a project or policy. It is used as a measure of cost effectiveness.

Best Management Practices (BMPs) – Appropriate, site-specific management techniques that maximize the benefits of land and natural resource management actions, while minimizing impacts.

Blue Line Stream – Those streams, creeks, ditches or other waterways which appear on a USGS 7 ½ minute quadrangle map, shown by a blue line, or other comparable streams, creeks, ditches, or waterways that do not appear merely because of the date of compilation of the USGS map.

Building – A structure that is walled and roofed, principally above ground and permanently affixed to a site. The term includes a manufactured home on a permanent foundation on which the wheel and axles carry no weight.

Building codes – Regulations that set forth standards and requirements for the construction, maintenance, operation, occupancy, use, or appearance of buildings, premises, and dwelling units. Building codes can include standards for structures to withstand natural hazards.

Capability assessment – An assessment that provides an inventory and analysis of a community or state's current capacity to address the threats associated with hazards. The capability assessment attempts to identify and evaluate existing policies, regulations, programs, and practices that positively or negatively affect the community or state's vulnerability to hazards or specific threats.

Census Block – A subdivision of a census tract (or, prior to 2000, a block numbering area), a block is the smallest geographic unit for which the U.S. Census Bureau tabulates 100-percent data. Many blocks correspond to individual city blocks bounded by streets, but blocks – especially in rural areas – may include many square miles and may have some boundaries that are not streets.

Census Tract – A small, relatively permanent statistical subdivision of a county delineated by a local committee of census data users for the purpose of presenting data. Census tract boundaries normally follow visible features, but may follow governmental unit boundaries and other non-visible features in some instances; they always nest within counties. Designed to be relatively homogeneous units with respect to population characteristics, economic status, and living conditions at the time of establishment, census tracts average about 4,000 inhabitants. They may be split by any sub-county geographic entity.

Channel maintenance – Ensuring that flood channels, storm sewers, retaining ponds, etc. do not become blocked by debris, sedimentation, overgrowth, or structural failure.

Community Rating System (CRS) – CRS is a program that provides incentives for National Flood Insurance Program communities to complete activities that reduce flood hazard risk. When the community completes specified activities, the insurance premiums of the policyholders in those communities are reduced.

Comprehensive plan – A document, also known as a “general plan,” covering the entire geographic area of a community and expressing community goals and objectives. The plan lays out the vision, policies, and strategies for the future of the community, including all of the physical elements that will determine the community's future development. This plan can discuss the community's desired physical development, desired rate and quantity of growth, community character, transportation services, location of growth, and siting of public facilities and transportation. In most states, the comprehensive plan has no authority in and of itself, but serves as a guide for community decision-making.

Construction of barriers around structures – Protective structures, such as berms and retaining walls, created by grading or filling areas with soil meant to keep flood waters from reaching buildings.

Content Value – The value of a building's content include all the items in a building, excluding the structure itself. The values are estimated to be 50 percent of the residential structural value and 100 percent of the commercial building replacement value.

Critical facilities – Facilities vital to the health, safety, and welfare of the population and that are especially important following hazard events. Critical facilities include, but are not limited to, shelters, police and fire stations, and hospitals.

As defined for the Louisville Metro risk assessment, this category includes.... Any facility which if unusable or unreachable because of a hazard would seriously and adversely affect the health and safety of the public. Critical facilities, to include, but not limited to schools, hospitals, nursing homes, and housing likely to contain occupants not sufficiently mobile to avoid injury or death unaided during a flood; police stations, fire stations, emergency vehicle and emergency equipment storage facilities, and emergency operations centers likely to be called upon before, during and after an event; public and private utility facilities important to maintaining or restoring normal services before, during and after an event; and those structures or facilities which produce, use, or store highly volatile, flammable, explosive, toxic, and/or water reactive materials.

Debris – The scattered remains of assets broken or destroyed in a hazard event. Debris caused by a wind or water hazard event can cause additional damage to other assets.

Density controls – Regulations that manage growth by limiting the density of development, often expressed in terms of the number of dwelling units per acre. Density controls allow the community to plan in an orderly way for infrastructure.

Design review standards – Guidelines enacted by local governments requiring new development to meet certain appearance and aesthetic standards and establishing a process by which local officials can examine site plans or structure blueprints to assess compliance with those standards. Design review standards can help ensure new development blends with existing buildings and the landscape or meet other priorities, including hazard loss reduction.

Design standards – A set of guidelines pertaining to the appearance and aesthetics of buildings or improvements that governs construction, alteration, demolition, or relocation of a building or improvement of land.

Digital Elevation Model (DEM) – U.S. Geological Survey (USGS) Digital Elevation Model (DEM) data files are digital representations of cartographic information in a raster form. DEMs include a sampled array of elevations for a number of ground positions at regularly spaced intervals. These digital cartographic/geographic data files are produced by USGS as part of the National Mapping Program.

Disaster Mitigation Act of 2000 (DMA 2000) – (Public Law 106-390, signed into law on October 10, 2000) Law that requires and rewards local and state pre-disaster planning, promotes sustainability as a strategy for disaster resistance, and is intended to integrate state and local planning with the aim of strengthening statewide mitigation planning.

Displacement Time – After a hazard occurs, the average time (in days) that a building's occupants must operate from a temporary location while repairs are made to the original building due to damages resulting from the hazard.

Drought – A period of time without substantial rainfall that persists from one year to the next. Droughts can affect large areas and can impact areas that range from a few counties to several states. Along with decreasing water supplies for human consumption and use, droughts can kill crops, livestock, grazing land, edible plants, and even, in severe cases, trees.

Duration – The length of time a hazard occurs.

Earthquake – A sudden motion or trembling that is caused by a release of strain accumulated within or along the edge of earth's tectonic plates.

Easements – Grants a right to use property, or restrict the landowner's right to use the property in a certain way.

Economic Loss Ratio – The estimated value of the loss divided by the total inventory value. This represents the percent of the total occupancy class inventory value that likely would be incurred to repair or restore the facility to its original, pre-hazard state. A loss ratio of less than 1 percent is considered to

be a very low risk; 1 to 5 percent to be low; 5 to 20 percent to be medium; 20 to 40 percent to be high; and greater than 40 percent to be very high.

Elevation of structures – Raising structures above the base flood elevation to protect structures located in areas prone to flooding.

Emergency response services – The actions of first responders such as firefighters, police, and other emergency services personnel at the scene of a hazard event. The first responders take appropriate action to contain the hazard, protect property, conduct search and rescue operations, provide mass care, and ensure public safety.

Eminent domain – The right of a government to appropriate private property for public use, with adequate compensation to the owner.

Environmental review standards – Guidelines established to ensure new development adheres to certain construction and site design standards to minimize the impact on the environment.

Erosion – Wearing away of the land surface by detachment and movement of soil and rock fragments during a flood or storm over a period of years, through the action of wind, water, or other geologic processes.

Erosion Hazard Area – Area anticipated to be lost to shoreline retreat over a given period of time. The projected inland extent of the area is measured by multiplying the average annual long-term recession rate by the number of years desired.

Essential Facility – A facility that is important to ensure a full recovery of a community or state following the occurrence of a hazard. These facilities can include government facilities, major employers, banks, schools, and certain commercial establishments (such as grocery stores, hardware stores, and gas stations).

Exposure – The number and dollar value of assets that are considered to be at risk during the occurrence of a specific hazard.

Extent – The size of an area affected by a hazard or the occurrence of a hazard.

Federal Emergency Management Agency (FEMA) – Independent agency (now part of the Department of Homeland Security) created in 1978 to provide a single point of accountability for all Federal activities related to disaster mitigation and emergency preparedness, response, and recovery.

Fire proofing – Actions taken on and around buildings to prevent the spread of fires.

Flash Flood – A flood occurring with little or no warning where water levels rise at an extremely fast rate.

Flood – A general and temporary condition of partial or complete inundation of normally dry land areas resulting from (1) the overflow of inland or tidal waters, (2) the unusual and rapid accumulation or runoff of surface waters from any source, or (3) mudflows or the sudden collapse of shoreline land.

Flood Depth – Height of the flood water surface above the ground surface.

Flood Elevation – Height of the water surface above an established datum (for example, the National Geodetic Vertical Datum of 1929, North American Vertical Datum of 1988, or Mean Sea Level).

Flood Hazard Area – Area shown on a map to be inundated by a flood of a given magnitude.

Flood Information Tool (FIT) – HAZUS-MH tool designed to process and convert locally available flood information to data that can be used by the HAZUS-MH Flood Module. The FIT is a system of instructions, tutorials, and GIS analysis scripts. When provided with user-supplied inputs (for example,

ground elevations, flood elevations, and floodplain boundary information), the FIT calculates flood depth and elevation for riverine and coastal flood hazards.

Flood Insurance Rate Map (FIRM) – Official map of a community, prepared by FEMA, which shows both the special flood hazard areas and the risk premium zones applicable to the community.

Flood Insurance Study (FIS) – A study that provides an examination, evaluation, and determination of flood hazards and, if appropriate, corresponding water surface elevations in a community or communities.

Flood Mitigation Assistance (FMA) Program – A program created as part of the National Flood Insurance Reform Act of 1994. FMA provides funding to assist communities and states in implementing actions that reduce or eliminate the long-term risk of flood damage to buildings, manufactured homes, and other NFIP insurable structures, with a focus on repetitive loss properties.

Floodplain – Any land area, including a watercourse, susceptible to partial or complete inundation by water from any source.

Floodplain development regulations – Regulations requiring flood insurance and mandating certain design aspects of new or substantially improved structures that lie within regulated flood-prone areas. Current federal regulations through the National Flood Insurance Program require that, at a minimum, new residential buildings in the Special Flood Hazard Area have their lowest floor at or above the base flood elevation.

Floodplain zoning – Zoning regulations that prescribe special uses for and serve to minimize development in floodplain areas.

Floodproofing – Actions that prevent or minimize future flood damage. Making the areas below the anticipated flood level watertight or intentionally allowing floodwaters to enter the interior to equalize flood pressures are examples of flood proofing.

Forest and vegetation management – The management of forests and vegetation so they are resilient to landslides, high-winds, and other storm-related hazards.

Forest fire fuel reduction – Minimizing fuel loads in forested areas by clearing excess ground cover and thinning diseased or damaged woodland to create healthier forests and to decrease the vulnerability to the devastation of forest fire.

Frequency – A measure of how often events of a particular magnitude are expected to occur. Frequency describes how often a hazard of a specific magnitude, duration, and/or extent typically occurs, on average. Statistically, a hazard with a 100-year recurrence interval is expected to occur once every 100 years on average, and would have a 1 percent chance – its probability – of happening in any given year. The reliability of this information varies depending on the kind of hazard being considered.

Geographic Information Systems (GIS) – A computer software application that relates data regarding physical and other features on the earth to a database to be used for mapping and analysis.

GIS Shape Files – A type of GIS vector file developed by ESRI for its ArcView software. This type of file is comprised of a table and a graphic. The records in the table are linked to corresponding objects in the graphic.

Goals – General guidelines that explain what you want to achieve. They are usually broad policy-type statements, long term in nature, and represent global visions.

Hazard – A source of potential danger or an adverse condition that can cause harm to people or cause property damage. For this risk assessment, priority hazards were identified and selected for the pilot project effort. A natural hazard is a hazard that occurs naturally (such as flood, wind, and earthquake). A man-made hazard is one that is caused by humans (for example, a terrorist act or a hazardous material spill). Hazards are of concern if they have the potential to harm people or property.

Hazard Identification – The process of identifying hazards that threaten an area.

Hazard Mitigation – Sustained actions taken to reduce or eliminate the long-term risk and effects that can result from the occurrence of a specific hazard. For example, building a retaining wall can mitigate potential hazards.

Hazardous Materials –

- 1) Any substance designated pursuant to Section 311(b)
- 2) (a) of the Federal Water Pollution Control Act. 2) Any element, compound, mixture, solution, or substance designated by the U.S. Environment Protection Agency (EPA) pursuant to the Comprehensive Environment Response, Compensation, and Liability Act of 1980, Section 102 (CERCLA).
- 3) Any hazardous waste having the characteristics identified under or listed pursuant to Section 3001 of the Solid Waste Disposal Act (commonly known as the Resource Conservation and Recovery Act or RCRA), but not including any waste the regulation of which under the Solid Waste Disposal Act has been suspended by the an Act of Congress.
- 4) Any toxic pollutant listed under Section 307(a) of the Federal Water Pollution Control Act.
- 5) Any hazardous air pollutant listed under Section 112 of the Clean Air Act.
- 6) Any imminently-hazardous chemical substance or mixture with respect to which the Administrator of the U.S. Environmental Protection Agency has taken action pursuant to Section 7 of the Toxic Substances Control Act.
- 7) Any substance designated an extremely hazardous substance pursuant to Section 302(a) of the Superfund Amendments and Reauthorization Act of 1986 (SARA). The term does include petroleum, including crude oil or any fraction thereof which is not otherwise specifically listed or designated as a hazardous substance under subparagraphs of this definition, and the term does include, if stored, natural gas, natural gas liquids, liquefied natural gas, or synthetic gas usable for fuel (or mixtures of natural gas, or synthetic gas.) Hazardous materials shall include those contained in the most recent version of 40 CFR 302.4. Hazardous materials shall not include household wastes and other materials excluded by 40 CFR 261.4

Hazardous Materials Incident - The actual release of a hazardous material which:

- 1) (a) poses an imminent threat to the environment or to the health, safety, or welfare of either individuals at the site of the incident, or of the general population; and
(b) requires immediate response, incident assessment, control, containment, and abatement of the immediate hazard by an outside agency; or
- 2) involves a reportable quantity of hazardous materials, regardless of whether abatement occurs by employees at the site of the incident, or by any outside agencies.

Hazard Mitigation Grant Program (HMGP) – Authorized under Section 404 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act, HMGP is administered by FEMA and provides grants to states, tribes, and local governments to implement hazard mitigation actions after a major disaster declaration. The purpose of the program is to reduce the loss of life and property due to natural disasters and to enable mitigation activities to be implemented as a community recovers from a disaster.

Hazard Mitigation Plan – A collaborative document in which hazards affecting the community are identified, vulnerability to hazards are assessed, and consensus is reached on how to minimize or eliminate the effects of these hazards.

Hazard Profile – A description of the physical characteristics of a hazard, including a determination of various descriptors including magnitude, duration, frequency, probability, and extent. In most cases, a community can most easily use these descriptors when they are recorded and displayed as maps.

Hazard Risk Gauge – The graphic icon used during the initial planning process to convey the relative risk of a given hazard in the study area. The scale ranges from yellow, indicating relatively low risk, to red, indicating severe risk.

Hazard threat recognition – The process of identifying possible hazards and estimating potential consequences.

Hazard warning systems – Systems or equipment such as community sirens and National Oceanic Atmospheric Administration (NOAA) weather radios designed to provide advanced warning of an impending hazard. Warning systems allow communities to take protective actions before a hazard event occurs, including taking cover, finding shelter, or moving furniture, cars, and people out of harm's way.

Hazards of Interest – Hazards considered most likely to impact a community based on frequency, severity, or other factors such as public perception. These are identified using available data and local knowledge.

HAZUS-MH (Hazards U.S. - Multi-Hazard) – A GIS-based, nationally standardized, loss estimation tool developed by FEMA. HAZUS-MH is the new multi-hazard version that includes earthquake, wind, hurricane, and flood loss estimate components.

HAZUS-MH Provided Data – The databases included in the HAZUS-MH software that allow users to run a preliminary analysis without collecting or using local data.

Health and safety maintenance – Sections of emergency response/operations plans that provide for the security of affected areas, including clean up and special precautions for each type of hazard (e.g., draining standing water after a flood, cautioning about aftershocks after an earthquake or successive tsunami waves, etc.).

High Potential Loss Facilities – Facilities that would have a high loss associated with them, such as nuclear power plants, dams, and military installations.

Hillside development regulations – Site design and engineering techniques prescribed through regulations such as selective grading, drainage improvements, and vegetation clearance to eliminate, minimize, or control development on hillsides, thereby protecting the natural features of hillsides and reducing the likelihood of property damage from landslides.

HMPC Plan - A Hazardous Materials Use and Spill Prevention Control Plan, as set forth in Section 95.07 of the Metro Hazardous Materials Ordinance.

Infrastructure – The public services of a community that have a direct impact on the quality of life. Infrastructure includes communication technology such as phone lines or Internet access, vital services such as public water supplies and sewer treatment facilities, transportation system (such as airports, heliports, highways, bridges, tunnels, roadbeds, overpasses, railways, bridges, rail yards, depots; and waterways, canals, locks, seaports, ferries, harbors, dry docks, piers and regional dams).

Intensity – A measure of the effects of a hazard occurring at a particular place.

Interface – A fire hazard term used to describe areas where homes and other structures have been built on or adjacent to forest and range lands. It is an intermingling of man-made structures with natural cover at various degrees of growth and complexity.

Inventory – The assets identified in a study region. The inventory assessment addresses what can be lost when a disaster occurs, that is, what community resources are at risk. Assets include people, buildings, transportation, and other valued community resources.

Levees and floodwalls – Flood barriers constructed of compacted soil or reinforced concrete walls.

Lifelines – Critical facilities that include utility systems (potable water, wastewater, oil, natural gas, electric power facilities, and communication systems) and transportation systems (airways, bridges, roads, tunnels, and waterways).

Loss Estimation – The process of assigning hazard-related damage and loss estimates to inventory, infrastructure, lifelines, and population data. Loss estimation is essential to decision making at all levels of government and provides a basis for developing mitigation plans and policies. It also supports planning for emergency preparedness, response, and recovery.

Lowest Floor – Under the NFIP, the lowest floor of the lowest enclosed area (including basement) of a structure. For the HAZUS-MH flood model, this information can be used to assist in assessing the damage to buildings.

Magnitude – A measure of the strength of a hazard occurrence. The magnitude (also referred to as severity) of a given hazard occurrence is usually determined using technical measures specific to the hazard. For example, ranges of wind speeds are used to categorize tornados.

Major Disaster Declarations – Post-disaster status requested by a state's governor when local and state resources are not sufficient to meet disaster needs. It is based on the damage assessment, and an agreement to commit state funds and resources to the long-term recovery. The event must be clearly more than the state or local government can handle alone.

Manufacture - To produce, import, or compound a hazardous material, whether produced as an end product or by-product in the production of another substance. The term shall also include hazardous materials that remain in end products as impurities.

Mitigation actions – Activities, measures, or projects that help achieve the goals and objectives of a mitigation plan.

Mitigation Plan – A plan that documents the process used for a systematic evaluation of the nature and extent of vulnerability to the effects of natural hazards typically present in a state or community. The plan includes a description of actions to minimize future vulnerability to hazards. This plan should be developed with local experts and significant community involvement.

National Flood Insurance Program (NFIP) – Federal program created by Congress in 1968 that makes flood insurance available in communities that enact minimum floodplain management regulations in 44 Code of Federal Regulations (CFR) §60.3.

National Weather Service (NWS) – Organization that prepares and issues flood, severe weather, and coastal storm warnings and can provide technical assistance to Federal and state entities in preparing weather and flood warning plans.

Objectives – Objectives define strategies or implementation steps to attain the identified goals. Unlike goals, objectives are specific and measurable.

Open space preservation – Preserving undeveloped areas from development through any number of methods, including low-density zoning, open space zoning, easements, or public or private acquisition. Open space preservation is a technique that can be used to prevent flood damage in flood-prone areas, land failures on steep slopes or liquefaction-prone soils, and can enhance the natural and beneficial functions of floodplains.

Ordinance – A term for a law or regulation adopted by a local government.

Peak Ground Acceleration (PGA) – PGA is the movement experienced by a particle on the ground during a seismic event.

Performance standards – Standards setting the allowable effects or levels of impact of development. Often used in conjunction with traditional zoning, the standards typically address specific environmental

conditions, traffic, or stormwater runoff. Can also be imposed on structures in hazard areas to ensure they withstand the effect of hazards.

Planimetric – Maps that indicate only man-made features like buildings.

Planning – The act or process of making or carrying out plans; the establishment of goals, policies and procedures for a social or economic unit.

Policy – A course of action or specific rule of conduct to be followed in achieving goals and objectives.

Post-disaster mitigation – Mitigation actions taken after a disaster has occurred, usually during recovery and reconstruction.

Post-disaster recovery ordinance – An ordinance authorizing certain governmental actions to be taken during the immediate aftermath of a hazard event to expedite implementation of recovery and reconstruction actions identified in a pre-event plan.

Post-disaster recovery planning – The process of planning those steps the jurisdiction will take to implement long-term reconstruction with a primary goal of mitigating its exposure to future hazards. The post-disaster recovery planning process can also involve coordination with other types of plans and agencies, but it is distinct from planning for emergency operations.

Presidential Disaster Declaration – A post-disaster status that puts into motion long-term federal recovery programs, some of which are matched by state programs, and designed to help disaster victims, businesses, and public entities in the areas of human services, public assistance (infrastructure support), and hazard mitigation. If declared, funding comes from the President's Disaster Relief Fund and disaster aid programs of other participating federal agencies.

Probability – A statistical measure of the likelihood that a hazard event will occur.

Public education and outreach programs – Any campaign to make the public more aware of hazard mitigation and mitigation programs, including hazard information centers, mailings, public meetings, etc.

Public Sewer – A sewer owned or operated by MSD. Public sewers are further classified as sanitary, combined (sanitary and storm) and storm sewers.

Real estate disclosure – Laws requiring the buyer and lender to be notified if a property is located in a hazard-prone area.

Recurrence Interval – The average time between the occurrence of hazards of similar size in a given location. This interval is based on the probability that the given event will be equaled or exceeded in any given year.

Regulation – Most states have granted local jurisdictions broad regulatory powers to enable the enactment and enforcement of ordinances that deal with public health, safety, and welfare. These include building codes, building inspections, zoning, floodplain and subdivision ordinances, and growth management initiatives.

Release - Any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment, but excludes:

- 1) With respect to a claim which such parties may assert against the employer of such parties as provided by CERCLA regulations, any release which results in exposure to parties solely within a workplace;
- 2) Emissions from the engine exhaust of a motor vehicle, rolling stock, aircraft, vessel, or pipeline pumping station engine; and
- 3) The normal application of fertilizer and pesticides.

Relocation out of hazard areas – A mitigation technique that features the process of demolishing or moving a building to a new location outside the hazard area.

Repetitive Loss Property – A property that is currently insured for which two or more NFIP losses (occurring more than ten days apart) of at least \$1,000 each have been paid within any 10-year period since 1978.

Replacement Value – The cost of rebuilding or repairing a structure. This cost is usually expressed in terms of cost per square foot and reflects the present-day cost of labor and materials to construct a building of a particular size, type, and quality.

Reportable Quantity of a Hazardous Material – The quantity as set forth in Section 95.04 of the Hazardous Materials Ordinance.

Reservoirs – Large water storage facilities that can be used to hold water during peak runoff periods for controlled release during off-peak periods.

Resources – Resources include the people, materials, technologies, money, etc., required to implement strategies or processes. The costs of these resources are often included in a budget.

Retrofitting – See definition for structural retrofitting.

Risk – The estimated impact that a hazard would have on people, services, facilities, and structures in a community; the likelihood of a hazard occurring and resulting in an adverse condition that causes injury or damage. Risk is often expressed in relative terms such as a high, moderate, or low likelihood of sustaining damage above a particular threshold due to occurrence of a specific type of hazard. Risk also can be expressed in terms of potential monetary losses associated with the intensity of the hazard.

Risk Assessment – A methodology used to assess potential exposure and estimated losses associated with priority hazards. The risk assessment process includes four steps: (1) identifying hazards, (2) profiling hazards, (3) conducting an inventory of assets, and (4) estimating losses. This pilot project report documents this process for selected hazards addressed as part of the pilot project.

Risk Factors – Characteristics of a hazard that contribute to the severity of potential losses in the study area.

Riverine – Of or produced by a river (for example, a riverine flood is one that is caused by a river overflowing its banks).

Safe room/shelter – A small interior room constructed above grade and used to provide protection from tornadoes and other severe storm events. Bathrooms and large closets often double as safe rooms.

Scale – A proportion used in determining a dimensional relationship; the ratio of the distance between two points on a map and the actual distance between the two points on the earth's surface.

Scour – Removal of soil or fill material by the flow of floodwaters. This term is frequently used to describe storm-induced, localized, conical erosion around pilings and other foundation supports where the obstruction of flow increases turbulence.

Sediment and erosion control regulations – Regulations that stipulate the amount of sediment and erosion that is acceptable for land undergoing development.

Special use permits – Permits granted by local governments for land uses that have the potential for creating conflicts with uses on adjacent properties.

Stafford Act – The Robert T. Stafford Disaster Relief and Emergency Assistance Act, Public Law (PL) 100-107 was signed into law on November 23, 1988. This law amended the Disaster Relief Act of 1974,

PL 93-288. The Stafford Act is the statutory authority for most Federal disaster response activities, especially as they pertain to FEMA and its programs.

Stakeholder – Individual or group that will be affected in any way by an action or policy. Stakeholders include businesses, private organizations, and citizens.

State Hazard Mitigation Officer (SHMO) – The representative of state government who is the primary point of contact with FEMA, other state, and Federal agencies, and local units of government in the planning and implementation of pre- and post-disaster mitigation activities.

Stormwater management regulations – Regulations governing the maintenance and improvement of urban stormwater systems and the implementation of land treatment actions to minimize the effects of surface water runoff. Land treatment actions include maintenance of vegetative cover, terracing, and slope stabilization.

Strategy – Collection of actions to achieve goals and objectives.

Stream corridor restoration – The restoration of the areas bordering creeks, including the stream bank and vegetation.

Stream dumping regulations – Regulations prohibiting dumping in the community's drainage system, thereby maintaining stream carrying capacities and reducing the possibility of localized flooding.

Structural retrofitting – Modifying existing buildings and infrastructure to protect them from hazards.

Subdivision – The division of a tract of land into two or more lots for sale or development.

Subdivision and development regulations – Regulations and standards governing the division of land for development or sale. Subdivision regulations can control the configuration of parcels, set standards for developer-built infrastructure, and set standards for minimizing runoff, impervious surfaces, and sediment during development. They can be used to minimize exposure of buildings and infrastructure to hazards.

Substantial Damage – Damage of any origin sustained by a structure in a SFHA, for which the cost of restoring the structure to its pre-hazard event condition would equal or exceed 50 percent of its pre-hazard event market value.

Taxation – Taxes and special assessments can be an important source of revenue for governments to help pay for mitigation activities. The power of taxation can also have a profound impact on the pattern of development in local communities. Special tax districts, for example, can be used to discourage intensive development in hazard-prone areas.

Threatened Release - A circumstance which presents a substantial threat of a hazardous material incident as a result of a transportation incident or incident when container structure damage is apparent or the potential for container structure damage exists; a circumstance which presents a substantial threat of a hazardous material incident at a fixed site facility as a result of damage or failure to a production system(s) or as a result of a non-functional process safety engineering control.

Topographic – Map that shows natural features and indicates the physical shape of the land using contour lines based on land elevation. These maps also can include manmade features (such as buildings and roads).

Transportation Systems – One of the lifeline system categories. This category includes airways (airports, heliports), highways, bridges, tunnels, roadbeds, overpasses transfer centers, railways (tracks, tunnels, bridges, rail yards, depots), and waterways (canals, locks, seaports, ferries, harbors, dry docks, piers).

Utility Systems – One of the lifeline system categories. This category includes potable water, wastewater, oil, natural gas, electric power facilities, and communication systems.

Vulnerability – Description of how exposed or susceptible an asset is to damage. This term depends on an asset's construction, contents, and the economic value of its functions. Like indirect damages, the vulnerability of one element of the community is often related to the vulnerability of another. For example, many businesses depend on uninterrupted electrical power. If an electric substation is flooded, it will affect not only the substation itself, but a number of businesses as well. Often, indirect effects can be much more widespread and damaging than direct ones.

Vulnerability Assessment – Evaluation of the extent of injury and damage that may result from a hazard event of a given intensity in a given area. The vulnerability assessment should address impacts of hazard occurrences on the existing and future built environment.

Watershed – Area of land that drains down gradient (from areas of higher land to areas of lower land) to the lowest point; a common drainage basin. The water moves through a network of drainage pathways, both underground and on the surface. Generally, these pathways converge into streams and rivers, which become progressively larger as the water moves downstream, eventually reaching an estuary, lake, or ocean.

Wetlands development regulations – Regulations designed to preserve and/or minimize the impact of development on wetlands.

Windproofing – Modification of design and construction of buildings to withstand wind damage.

Windstorm – A storm characterized by high wind velocities.

Zone – A geographical area shown on a National FIRM that reflects the severity or type of flooding in the area.

Zoning – The division of land within a local jurisdiction by local legislative regulation into zones of allowable types and intensities of land uses.

Zoning or landuse map – A map that identifies the various zoning district boundaries and the uses permitted by a zoning ordinance within those boundaries.

Zoning ordinance – Designation of allowable land use and intensities for a local jurisdiction. Zoning ordinances consist of two components: a zoning text and a zoning map.